

A B S T R A C T

A METHOD AND APPARATUS FOR MEASURING THE PROPAGATION TIME
OF A SIGNAL, IN PARTICULAR AN ULTRASOUND SIGNAL

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A method of measuring the propagation time T_p of an
ultrasound signal between two spaced-apart transducers,
one constituted by an emitter and the other by a
receiver, the emitter transducer being subjected to an
10 excitation signal causing an ultrasound wave to be
emitted towards the receiver transducer, said ultrasound
wave causing the receiver transducer to output a receive
signal, the method comprising the following steps:

- beginning a measurement of an intermediate
15 propagation time T_{int} at the beginning of emitter
transducer excitation;

- detecting the receive signal output by the
receiver transducer and counting the oscillations in said
receive signal;

- 20 • stopping the measurement of the intermediate
propagation time T_{int} when an i^{th} oscillation is detected;
and

- determining the propagation time T_p of the signal
by taking the difference $T_{int} - i \times T_e$.

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